Internal Draft Document — October 2017

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Community Partnership Manual

DRAFT October 2017

The subject draft is not to be circulated or used as an official document.

Prepared by Nevada STEM Advisory Council Community Partnership Subcommittee

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Preface

The Community Partnership subcommittee of the Nevada STEM Advisory Council (NSAC) was established in March 2016. The purpose of the subcommittee is to advise the NSAC on issues pertaining to Community Partnerships.

Roles and Responsibilities for the Community Partnership Subcommittee:

- 1. To articulate the greater benefits for learning through meaningful (strategic and tactical) Community Partnerships.
- 2. To recognize common goals between formal, non-formal, and informal learning communities.
- 3. To assist and strengthen communications and desired outcomes of the diverse agencies, organizations, operators, and partners committed to improving learning in Nevada.
- 4. Provide one voice regarding the varied opportunities for Community Partnerships to support and benefit Nevada's educational system resulting in strengthened student performance.

Relation of the Community Partnership Subcommittee in the NSAC (2017) Strategic Plan:

>>>> FINISH THIS >>>>

Priority 2: Quality and Scope (pg 9)

Goal 1: Improve quality and quantity in schools

Strategy 7: increase number of opportunities and expand

Priority 4: Engagement and Alignment (pg 15)

Goal 2: Increase STEM education coordination Strategy 3: Incentivize time for teachers

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Nevada STEM Advisory Council Subcommittee – Community Partnerships

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1. BACKGROUND

Business and industry leaders in Nevada are increasingly concerned about the lack of a highly skilled pool of workers for their companies. An unforeseen result of the former No Child Left Behind Act was that many schools in Nevada reduced or deleted instruction in science, not to mention technology, physical education, and the arts, to meet requirements in math and reading.

Nevada's science scores lags behind the nation. Numerous national reports on Nevada have documented the lack of science and mathematics content knowledge and credential requirements of Nevada's K-8 teachers, resulting in many Nevada teachers who do not have adequate skills for teaching science.

In addition, the adoption of the Nevada Academic Content Standards for Science (NVACSS), derived from the Next Generation Science Standards (NGSS), by the Nevada Department of Education (Feb 2014) reflects the reality that science is so much more than just the rigid Scientific Method and "hypothesis based" science that has historically been taught in schools. The NVACSS allows for integrated teaching of Science, Technology, Engineering, and Mathematic (STEM) disciplines with reading, and encourages the application of practices and knowledge.

Given the challenges of limited qualified teachers and rising expectations, the importance of high-quality Community Partnerships has risen to a new high. The desire for partnerships that allows for the sharing of respective knowledge and the creation of authentic, fun and interesting curriculum is at a premium. Through curriculum that is forged and supported thru Community Partnerships students will be able to move through the scientific and engineering practices (that is, the things scientists and engineers do daily) identified by the National Research Council, the National Science Teachers Association, and the American Association for the Advancement of Science (REF).

The identified practices represent skill sets such as asking questions, collecting and analyzing data, and communicating information, that are used by STEM Professionals. These skill sets are not necessarily the skill sets that traditional educators possess. The blend of specific skills when STEM professionals and classically trained educators collaborate is powerful. Collaboration is

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necessary to create effective lessons for Nevada's students, and forging effective and productive community partnerships is a critical step to facilitate the blending of the necessary skill sets.

Community partnerships draw from a broad range of resources and expertise. Establishing new relationships with entities that are not familiar with the established educational system requires communication, training opportunities, and oversight. To successfully solve the complex challenge of raising student achievement an objective and systematic process should be implemented to continually assess if and how partners are improving learning in Nevada.

In support of the NSAC, and with a focus on Community Partnerships, this paper will:

- Begin to define the universe of community partnerships with operational definitions, and review the critical role of community partnerships in the learning environment
- Review how academic standards can be used to strengthen community partnerships
- Provide suggestions for how to establish a community partnership
- Provide a strategy to evaluate a community partnership

2. THE LEARNING ENVIRONMENT AND THE IMPORTANT ROLE OF COMMUNITY PARTNERSHIPS

The learning environment, in its totality, is the path that moves a very important learner (an individual) to a known place they want to go (dreams and goals), throughout their lifetime (Figure 1). It compasses formal education (going to school), informal education (going to museums), family and spiritual experiences, and general life experiences and those related to on-the-job training. Each of these wheels move independently, but carry a person towards a destination. The hope is that the destination is positive and reflects the individual's potential. However, it is all too often witnessed how one of the wheels may fail an individual and the path is less than desirable. While community partnerships, per se, are not identified in Figure 1, there is an intrinsic-understanding that the community partnerships are there, providing learning opportunities within the stated categories. For example, some evidence that can be used to support this assumption is that most students in Nevada have experienced a field trip to a museum or some activity, which is most likely the result of a community partnership.

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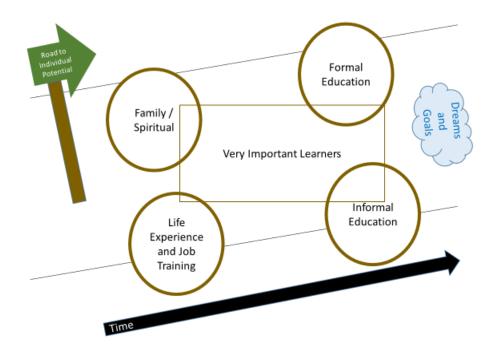


Figure 1. The Learning Environment.

2.1 The "Who"

A community partnership is a relationship between an entity or an individual with a very important learner, usually through or via another established entity (e.g., a school, museum, or employer), that provides or supports learning opportunities intended to move a learner towards a goal. The "who" of community partnerships is a wide net; there are numerous entities that provide learners with opportunities. Figure 2 presents some of the more common entities within the given roles (wheels, i.e, formal education, etc.), however, is in no way is it comprehensive. What Figure 2 does provide however, is a glimpse at the beginning of the complexity associated with defining or describing community partnerships; community partnerships can look very different. To future articulate the complexity of community partnerships so operational definitions can be established the following sections will continue to tease apart the "what", "why", "where", "when", and "how" to compete the picture.

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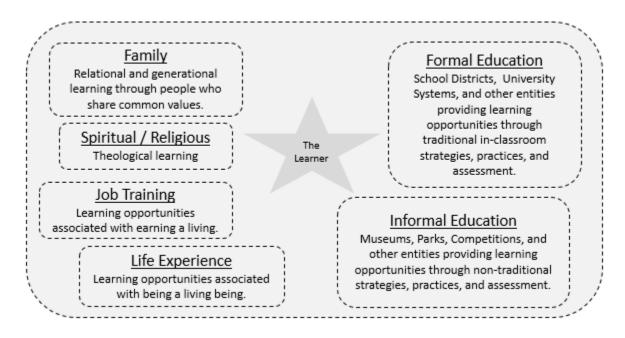


Figure 2. The "who" that provides the learner with learning opportunities (not comprehensive).

2.2 The "What"

The "who" can provide learning experiences (the "what") to learners in a variety of forms (Figure 3). Learning opportunities may be:

- Structured: in a classroom or in a formal education environment,
- Non-structured: free-flowing, self-directed learning
- · Authentic: naturally evolved lessons from life

A single entity may provide one, or a combination, of the different kinds of learning experiences.

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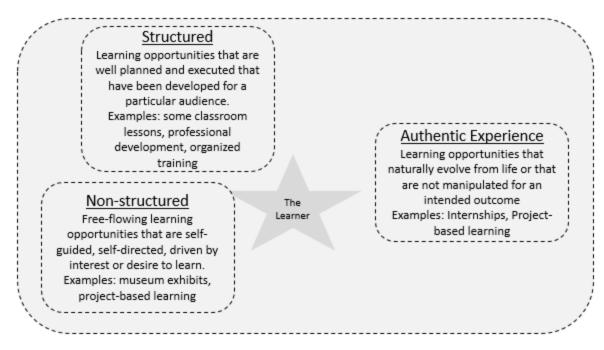


Figure 3. The "Who" can provide learning experiences (the "what) to learners in a variety of ways.

2.3 The "Why"

The "Who" provides or supports opportunities for learning for a variety of reasons (Figure 4). For example, some community partnerships are financial relationships which support learning opportunities, but do not actually provide a learning experience, per se. Whereas, other community partnerships are driven (established) by federal or state mandates, and funding may or may not be provided.

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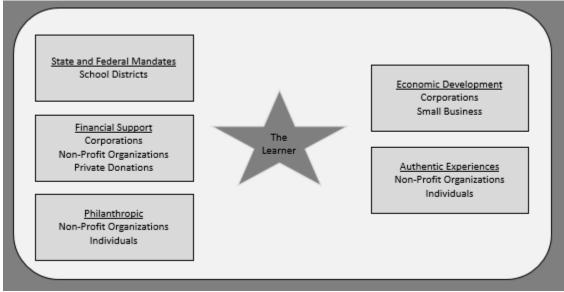
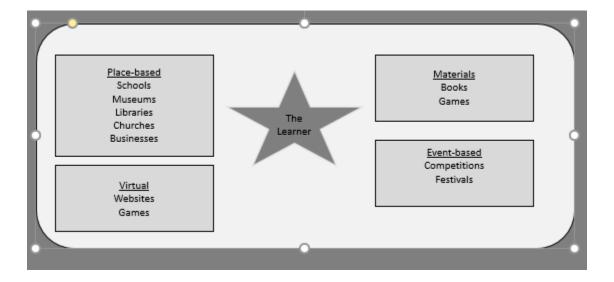


Figure 4. The "Who" provides their opportunities or support for a variety of reasons.

2.4 The "Where"

Community partnership learning opportunities occur in a variety of places (Figure 5). They may be place-based, such as at school or museum. In the 21st century, much of our learning occurs via the virtual world, through the internet or games. Learning also can occur via materials such as books. Other powerful learning experience venues are competitions or theme-based event, such as festivals.



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Figure 5. The "Who" provides learning opportunities through many venues.

2.5 The "When"

Learning should be occurring throughout a learners' lifetime (Figure 6). If community partnerships are limited to "school-age" then there are many years that are not considered.

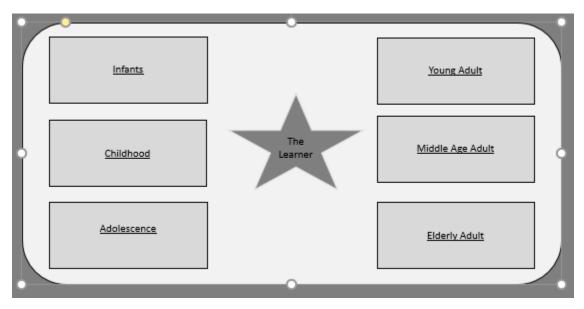


Figure 6. The "Who" can reach learners throughout a lifetime.

2.6 The "How"

Finally, the "how", or a time commitment, of a community partner to an individual can also vary greatly. For example, the engagement between a community partner and a learner may be through a special event, like a science fair. Or, the engagement may be a one-time experience, such as a guest lecture in a classroom, or a science seminar at a museum. Community partnerships may also be much longer term, providing mentoring that lasts for months or years.

2.7 Operational Community Partnership Types

DETERMINE THESE...something like...

2.7.1 Financial Partner

2.7.2 Special Event Partner

Science fair judges, exhibits at festivals Established competitions??? Lego League? Future Cities?

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2.7.3 Content Knowledge Partner

In class lectures, field trips about a topic

2.7.4 <u>Career Awareness Partner</u>

Career fair participation, field trips to businesses

2.7.5 Mentor Partner

Extended relationship resulting in a product?

2.7.6 Internship Partner

Providing opportunities at a place of business?

OTHERS???

3. USING ACADEMIC STANDARDS TO STRENGTHEN COMMUNITY PARTNERSHIPS

The Nevada Department of Education (NDE) has adopted academic standards for the classrooms in Nevada. Academic standards are the benchmarks or expectations for which learners are expected to learn. Academic standards generally are composed of practices, those things learners are expected to be able to "do", and content, the knowledge of a subject. For example, there are math standards (Box 1) and math content areas

>>>> KEEP WORKING ON THIS >>>>>

Trainings/Education for non-education people on the NGSS and other standards

4. HOW DO WE FORM A COMMUNITY PARTNERSHIP? INDUSTRY TO EDUCATION

| a. | Decide type of partner – financial, content area, | Match these |
|----|---|-------------|
| | If financial: | |

XXXXXXXXX.....

If academic:

b. Become familiar with academic standards so you know what you can best support

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- c. Decide grade level comfortable working with
- d. Decide time commitment

e.

5. HOW DO WE FORM A COMMUNITY PARTNERSHIP? EDUCATION TO INDUSTRY

- a. Identify standard that is needing support
- b. Identify kind of help needed Match these.....
- c. Parents are a great source and "in road"

d.

6. RUBRIC FOR PARTNERSHIP EVALUATION

This section will

- sets up criteria for a successful relationship (for each partner type)
 - Link relationships to standards (reinforces what is happening in the classroom?)
 - Evidence of student learning
 - o Evidence of cost-benefit relationship
- gets at the data that will need to be collected and how it can be used to make decisions.

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APPENDIX A

REFERENCES

Nevada STEM Advisory Council (NSAC). 2017. Advisory Council on Science, Technology, Engineering, and Mathematics - STEM Strategic Plan 2017. Nevada Governor's Office of Science, Innovation, and Technology (OSIT). Carson City, Nevada.

Free Dictionary. Electronically accessed December 20, 2016 at www.encyclopedia.thefreedictionary.com

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APPENDIX B

Established Community Partnerships within Nevada (as of XXXX)

Per the NSAC Strategic Plan (Priority 4, Goal 2, Strategy 4) this list of established Community Partnerships is provided to increase STEM education, workforce development and economic development coordination and cooperation.

HOW TO BEST ARRANGE? By partnership type? By county? Info to include?

| County | School / Education Entity | Industry Partner | Contact Person |
|-------------|--------------------------------|------------------|-----------------------|
| | Partner or Coordinating Office | | |
| Statewide | Nevada STEM Coalition – STEM | varies | BT |
| | Ambassador Program | | |
| Carson City | | | |
| Churchill | | | |
| Clark | School-Community Partnership | | Cheryl |
| | Program | | |
| | 4601 W. Bonanza Road | | |
| | Las Vegas, NV 89107 | | |
| | 702-799-6560 | | |
| | Future Cities | ??? | Pom |
| Douglas | | | |
| Elko | | | |
| Esmeralda | | | |
| Eureka | | | |
| Humboldt | | | |
| Lander | | | |
| Lincoln | | | |
| Lyon | | | |

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| Mineral | | |
|------------|--|--|
| Nye | | |
| Pershing | | |
| Storey | | |
| Washoe | | |
| White Pine | | |

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|--|-----------------|
| GLOSSARY | 00.000.201. |
| | |
| <u>Acronyms/Abbreviations</u> | |
| NDE Nevada Department of Education | |
| NSAC Nevada STEM Advisory Council | |
| NVACS-S Nevada Academic Content Standards - Science | |
| Operational Definitions | |
| <u>Stakeholder</u> : An individual or group or organization who is impacted by a process but not necessarily actively involved [Source] | or decision, |
| <u>Cooperator</u> : An entity actively partner involved in a process or decision-making a sharing of resources. Synonym: Partner [Source] | ictivity and/or |
| <u>Collaboration</u> : an open and inclusive process, a communication tool used by group a broad array of diverse entities that come together to find solutions for issues/p they [Source] | |
| <u>Community Partnership:</u> A relationship between an entity or an individual with a important learner, usually through or via another established entity (e.g., a school employer), that provides or supports learning opportunities intended to move a I towards a goal. | ol, museum, or |
| <u>Learning Environment</u> : In its totality, the path that moves a very important learn to a known place they want to go (dreams and goals), throughout their lifetime. | er (a person) |
| <u>Partnership</u> : shared values, shared goals, and active contribution [Source] und | lerstand |

desired outcomes and federal and state accountability elements for students and schools.

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Provider: [Source.....]

<u>Formal Education</u>: Education occurring inside a traditional?school setting [Free Dictionary]

<u>Informal Education</u>: Education (Learning) outside of a traditional school setting. This includes <u>homeschooling</u>, mass media, museums, libraries, zoos, after-school groups and other community-based and cultural institutions. [Free Dictionary]